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# Which Achievement Gap?

*The terms “achievement gap” and “AYP” are often bandied about in this era of NCLB. But is making AYP the same as closing the achievement gap? And shouldn’t we be talking about multiple achievement gaps? The authors explain the finer points of these terms that are driving so much of today’s education policy.*

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By Sharon Anderson, Elliott Medrich, and Donna Fowler

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**F**ROM the halls of Congress to the local elementary school, conversations on education reform have tossed around the term “achievement gap” as though we all know precisely what that means. To some extent, of course, we do. As it’s commonly used, “achievement gap” refers to the differences in scores on state or national achievement tests between various student demographic groups. And the gap that has been a long-standing source of the greatest concern is that between white students and minority students, although other groups have been brought into the picture by No Child Left Behind (NCLB). Our present urgent concern with the achievement gap has a specific objective: improved achievement for all students. We want all boats to rise, but we want those lying particularly low in the water to rise faster.

Seems straightforward, right? Wrong. Trying to define and measure this gap in ways that are accurate,

meaningful, and useful to policy makers, educators, and the public can be a humbling experience. As with many measurement issues, the devil is in the details. And the details here are highly consequential.

The adequate yearly progress (AYP) requirements of NCLB are designed to expose achievement gaps between groups of students, ostensibly so that schools will make greater efforts to close the gaps over time. But making AYP is not the same thing as closing achievement gaps. The great hope — still far from being realized — is that, as achievement improves across all student subgroups, the gaps will diminish as well. It is important to remember that, despite being the major preoccupation of most educators and policy makers, making AYP is not an end in itself; rather, tracking

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AYP is a means to the dual ends of closing achievement gaps and improving the performance of all students.

### WHAT IS THE ACHIEVEMENT GAP?

Defining the “achievement gap” is more difficult than it seems at first glance. But how we define the achievement gap and then measure it according to our chosen definition has significant implications for what we can know about it and what we can do with that knowledge.

We can measure many types of gaps, even just within the realm of student performance. Historically, most studies and reports on the achievement gap have focused on differences in achievement scores between white and African American students on national tests, such as the SAT or the National Assessment of Educational Progress. However, NCLB shifts the focus down to the school level and asks how well racial and ethnic subgroups in a given school are performing relative to their white peers.

At the school level there are at least two kinds of gaps with particular salience for policy: the internal gap (average differences between distinct racial and ethnic groups and their white peers within a school) and the external gap (average differences between the aggregate school scores for each student subgroup in the school and aggregate scores for white students across the state). Arguably, both of these gaps are important, and both are relevant to school reform efforts.

We believe that both internal and external gaps should be studied, for several reasons. Measuring the *internal gap* allows us potentially to identify — and learn from — schools that are accelerating the learning of minority students. This knowledge can be an important tool for focusing school improvement efforts.

Measuring the *external gap* is necessary, however, so that schools with high proportions of nonwhite students are not excluded from analysis just because they don’t have enough white students to report average scores. This measure can also identify schools that may not be making much progress toward closing their internal gaps — because they are raising the achievement of all students to the same degree — but that have made significant progress in advancing the performance of their nonwhite students compared with their white peers statewide.

Even if we stick with just these two kinds of achievement gap, the complexities multiply when we turn to the issue of which groups to compare. In addition to test-score breakdowns by student racial and ethnic groups, NCLB requires states to break out test scores accord-

ing to student poverty status, language, and disability status. Surely we are concerned about achievement disparities across all of these groups, but for some schools or districts, some gaps may pose a more urgent problem than others.

### FINDING SCHOOLS THAT ARE CLOSING THE GAP

Why try to identify schools that are closing their achievement gaps? Obviously, we want to see what we can learn from them about how they are succeeding. Have they undertaken systematic reforms directed at closing the gap, and, if so, what are these reforms? Are there effective strategies common to all such schools?

Identifying true gap-closing schools will allow us to look more closely at the following issues:

- Has the school undertaken whole-school, subject-matter, or specially targeted reforms intended to help close the gap?
- Has the curriculum changed to incorporate content or materials that may be boosting achievement for lower-performing students?
- Have there been changes in instructional practice or professional development?
- Do students in gap-closing schools show particular course-taking patterns that may contribute to improved achievement for minorities?
- Are gap-closing schools graduating students in higher proportions than previously or in comparison with other, higher-achieving schools?
- Are gap-closing schools moving larger proportions of graduates into postsecondary education as a result of their efforts?

Answering these questions could help us understand what successful schools do to close their achievement gaps over time. We need to know what works, so that lessons learned in one setting can provide guidance for policy and practice in other settings.

### FINDING THE RIGHT DATA

For illustrative purposes, let’s take a simplified example of measuring achievement gaps. Let’s assume we are interested in finding comprehensive high schools across the country that are succeeding in closing the achievement gap between their white students and their African American and Hispanic students. What assessments should be used to analyze achievement gaps and over what period of time?

The first hurdle we encounter is the lack of comparability of state data. Academic standards vary from

state to state, as do state assessments and cut scores for “passing” or “proficient” performance. States use different measurement scales, and even states using the same assessment (for example, the SAT-9) may use different versions of the test and give them at different times of year. States also vary considerably in the ways they collect and analyze data.

Another potential obstacle is the availability of student data to researchers and policy makers. Although schools and districts have records of individual student performance on assessments, those records may not be in forms (i.e., paper records or school-specific record systems) that lend themselves to an easy analysis of the achievement gap. Furthermore, data on individual students — even data in electronic form — are strictly protected by privacy statutes and are not often released outside the school system. Although aggregate student scores by subgroup are increasingly available since the passage of NCLB, these data lack the analytic power of individual student scores for examining the size of and change in achievement gaps.

Moreover, school improvement rarely follows a straight line. Test scores may advance for a year or two or even more and then retreat. Some groups may do better in some years than in others. Changes occur in policy and in curricula, and many other factors at the state, district, and school levels can disrupt an upward trend. Such uneven progress makes it essential that achievement data be examined over an adequate time period.

Two years are clearly not enough, because two data points describe only one change. Three years are better, but with just two changes evident, it is impossible to discern any consistent trend. Four years are perhaps a minimum, because with three changes to examine, it's possible to see if there is a trend showing the gap to be increasing, decreasing, or remaining the same.

To continue with our example, in order to measure both the internal and external achievement gaps for African American and Hispanic students compared to whites, we would need state data that:

- result from standards-based or norm-referenced assessments in English/language arts/reading and mathematics;
- span at least four years;
- derive from assessments that remained largely unchanged over the four years or featured scores that were adjusted to allow for comparison; and
- are disaggregated by race and ethnicity at the school level for each year.

From a policy perspective, a period of four years seems adequate for schools to demonstrate systematic change

that benefits all students. And it seems intuitively correct that a gap-closing school would be one in which scores of white, African American, and Hispanic students begin to converge because the school is improving the performance of its lower-achieving students.

To test these criteria against real data, we looked across the 50 states and the District of Columbia to see how many had school-level data that could be used for such an analysis. Depending on the four-year period chosen, the number of states varies, but in no case did the majority of states have usable data. In fact, if we choose states based on these criteria and use the most recent four years of data available as of 2004, only 10 states and the District of Columbia pass muster.

However, the states are rapidly improving their data systems in response to the requirements of NCLB, so more will probably make the cut over time. How many high schools in each state are closing the achievement gaps as defined here? This remains an empirical question that better data systems in more states will enable us to answer in the future.

## DEFINING SUCCESS IN CLOSING THE GAP

For each school, then, we could hypothetically examine eight discrete types of achievement gaps: the internal gap between whites and African Americans in both reading and mathematics, the internal gap between whites and Hispanics in reading and math, the external gap between whites statewide and African Americans in a given school in reading and math, and the external gap between whites statewide and Hispanics in a given school in reading and math.

For a school to be truly closing the achievement gap, in ways that are statistically sound and meaningful for the students who are the target of this effort, which gaps matter? Let us be clear: schools that *appear* to be closing the gap because white students are doing less well than minorities are not “gap-closing” schools by any definition.

Is a school closing the gap if Hispanic students' scores improve, but those of African Americans do not? If scores improve only in mathematics, but not in English/language arts? If the scores of African American students improve in English but not in math, while those of Hispanic students improve in math but not in English? If schools close the internal gap, but not the external gap, for one group but not another?

The possible permutations here can spiral into the ridiculous, but the question of which gaps count is a serious one. Under NCLB, the answer has consequences

for schools, for curriculum, for professional development, and for school governance — and, of course, for the students themselves. Moreover, the way achievement gaps are defined and measured has profound implications for the research that will ultimately be conducted to determine whether or not the No Child Left Behind approach to school improvement has worked. We owe it to the students in our schools and to the citizens who support them to provide the most accurate and meaningful data we can obtain.

Although NCLB requires schools, districts, and states to report scores in specific areas and for specific student groups, educators may find that certain gaps count more than others in their own schools or districts. They could use such data to see where intervention may be needed most urgently, to determine where to direct limited resources, and to chart their reform efforts on the basis of evidence rather than conjecture.

### PROCEED WITH CAUTION

The complexities inherent in these kinds of measurement suggest that defining achievement gaps and then using those definitions to identify schools that are successfully closing them is an exercise best approached with caution, thoughtfulness, and a solid understanding of what the resulting data can and cannot tell us. Specifically, the following issues should be kept in mind:

- *Schools closing the gap are not necessarily the highest-performing schools.* Schools closing the gap may be improving the performance of their African American and Hispanic students over time, relative to the performance of their white students. But these schools may still lag well behind others. It cannot be assumed that these gap-closing schools are the highest performers in the state. Although schools closing the gap may be exemplary in many ways, “gap-closing” and “high-performing” can be two different things.

- *Schools closing the gap are not necessarily making AYP.* To make AYP, schools must demonstrate continuous growth in student achievement in reading and mathematics — and eventually other subjects — across a number of student subgroups and for a specified proportion of test-takers. Each state defines AYP according to its own assessment system, and, for high schools, this definition includes such other factors as graduation rates. In addition to overall progress, schools must show progress for each statistically reliable student subgroup.

Our example focuses on gaps between white students and their African American and Hispanic peers, but these are only two of the student subgroups de-

finied by NCLB. A school could be closing the gaps for these groups, but not for others, such as special education students or low-income students, and so not be making AYP.

- *Schools making AYP are not necessarily closing the achievement gap.* State definitions of AYP are based on baseline test score results and expectations for yearly improvement, not on a continuous decrease in the gap between subgroup scores and overall achievement. Some gap-closing schools may be making AYP, but no assumptions should be made regarding the relationship of AYP to closing the achievement gap.

For some schools and communities, closing the achievement gap may be an important objective in its own right. For others, it may be less important than improving the performance of all students on state assessments or meeting the requirements for AYP. At present, making AYP and boosting state assessment scores hold center stage, while closing the achievement gap — rightly or wrongly — has been getting less attention.

- *Comparisons across states are inappropriate.* Americans are inordinately fond of comparisons and rankings, especially when it comes to schools and student achievement. And from a policy and governance perspective, it makes sense to be able to see how we as a nation are doing. But the variety of state standards and assessments, coupled with the paucity of sound data now available, makes legitimate comparisons across states impossible. Until we can devise more sophisticated ways to track our progress nationally, perhaps it makes more sense to focus on getting the state data right than on seeing which state is in first place.

Although these measurement issues can be daunting, it's important to keep the ultimate goal in mind: boosting the achievement of students who have traditionally been underperformers, so that they have the knowledge and skills they will need to succeed in the world outside school. Our aim is to give these young people a shot at a productive and self-sustaining adulthood. These stakes are high, indeed. The achievement gap between white and minority students is one of the most intractable problems facing our public schools and our society. The schools making real headway on this issue are worth a close look.

Can the strategies of schools closing the gap be “exported” to other schools struggling with this problem? Is their success a result of systematic efforts? What does it take to make them work? Answers to these questions can help us organize reform efforts around “what works,” using gap-closing strategies as a lever for school improvement for all. ■

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